

We Claim:

1. An assembly for creating a liquid seal in a medical device, the assembly comprising:
a liner wrapped around a rotatable torque tube to form a flood space there within, the liner extending longitudinally along at least a portion of the torque tube, and
a sealing member with an infusion port for infusing a sufficient amount of liquid in the flood space to create a seal around the torque tube.
2. The assembly of claim 1, wherein the flood space includes a clearance area between the liner and torque tube.
3. The assembly of claim 1, wherein the torque tube is a coiled drive shaft and the flood space includes gaps between the coils.
4. The assembly of claim 1, wherein the torque tube includes a lumen for a guide wire and the flood space includes the lumen.
5. The assembly of claim 1, further a suction port for aspirating fluid from a lumen extending within a catheter and wherein the liner separates lower pressure in the flood space from adjacent higher pressure outside or proximal to the flood space.
6. The assembly of claim 5, wherein the liner has a distal terminal end at an intersect area within the catheter and the pressure at the liner distal terminal end at least substantially equals the pressure of the lumen at the intersect area.
7. The assembly of claim 6, wherein liquid traveling in the flood space is forced to exit the flood space at the intersect area and travel into the lumen.
8. The assembly of claim 7, wherein the liner has a length that reduces fluid flow rate and restricts the amount of liquid exiting the flood space.
9. The assembly of claim 8, wherein the liner length is between 6 and 30 inches.

10. The assembly of claim 1, wherein the sealing member further comprises an overflow port for exit of excess liquid and wherein the torque tube extends through the overflow port.
11. The assembly of claim 1, wherein the liquid is blood that is extracted from a patient during use of the medical device on the patient.
12. An assembly for creating a liquid seal in a medical device, the assembly comprising:
 - a liner wrapped around a rotatable torque tube to form a flood space there within, the liner extending longitudinally along at least a portion of the torque tube, and
 - a sealing member comprising:
 - an infusion port for infusing a sufficient amount of liquid between the torque tube and the liner to create a seal around the torque tube, and
 - a suction port for aspirating fluid from a lumen extending within a catheter enclosing the liner,wherein the liner separates adjacent pressure outside or proximal to the flood space from pressure in the flood space.
13. The assembly of claim 12, wherein the liner has a distal terminal end at an intersect area within the catheter and liner has a length, such that the pressure at the liner distal terminal end to at least substantially equals the pressure of the lumen at the intersect area.
14. The assembly of claim 12, wherein liquid traveling in the flood space exits the flood space at the intersect area and travels into the lumen.
15. A medical device comprising:
 - a rotatable torque tube;
 - a catheter enclosing at least a portion of the torque tube; and
 - a sealing assembly comprising:
 - a liner wrapped around a rotatable torque tube to form a flood space there within, the liner extending longitudinally along at least a portion of the torque tube, and
 - a sealing member with an infusion port for infusing a sufficient amount of liquid in the flood space to create a seal around the torque tube.

16. The medical device of claim 15, further including a drive system coupled to the torque tube to rotate the torque tube.

17. The medical device of claim 15, further including a hand held unit and the sealing assembly are housed within the hand held unit.